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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,465	10/05/2001	Wilhelm R. Lowell	713511.24	4270
7590 07/01/2005			EXAMINER	
Husch & Eppenberger LLC 190 Carondelet Plaza St Louis, MO 63105			TRAN, CON P	
			ART UNIT	PAPER NUMBER
			2644	

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/972,465

Applicant(s)

LOWELL ET AL.

Examiner

Con P. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/05/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-3, 6-9, 12-14, and 17-19** are rejected under 35 U.S.C. 102(b) as being anticipated by Gordon U.S. Patent 4,330,691 (Cited by Applicants).

Regarding **claim 1**, Gordon teaches a speaker support system (including two superimposed rectangular adapted for use with a suspended ceiling (Fig. 3) of the type having a suspended ceiling grid (formed by 42, 44, Fig. 3; Figs. 14, 15) including a plurality of ceiling grid openings and a plurality of ceiling panels (182) sized to fit within the ceiling grid openings (see Figs. 3, 4, 10, 14, 15, and respective portions of the specification), the speaker support system comprising:

a speaker support base (larger rectangular 62, Fig. 4) capable of supporting at least one speaker (10) within the grid opening without interfering with the operation of the speaker (col. 3, lines 16-23);

a guide flange (vertical edge of 62) integral to the speaker support base (larger rectangular 62, Fig. 4), the guide flange being adapted to align at least a portion of a ceiling tile within the ceiling grid opening (see Figs. 3, 4, 15); and

a support flange (bottom shoulder 64, Fig. 4) of integral to the base portion (larger rectangular 62, Fig. 4), the support flange being adapted to support at least a portion of the ceiling tile (top shoulder 54, Fig. 4) within the ceiling grid opening so that at least a portion of the ceiling grid opening is filled with the speaker support base (larger rectangular 62, Fig. 4) and the remaining portion of the ceiling grid opening is filled with the portion of the ceiling tile (tile portion of integral ceiling tile-loudspeaker assembly 55, Fig. 4; col. 3, lines 11-23).

Regarding **claim 2**, Gordon teaches a speaker the speaker support system of claim 1 further including a support plate (top rectangular 60, Fig. 4) mounted to the speaker support base (bottom rectangular 62, Fig. 4) to strengthen the speaker support base (col. 3, lines 11-23).

Regarding **claim 3**, Gordon teaches the speaker support system of claim 1 further including at least one speaker (10, Fig. 4) mounted on the speaker support base.

Regarding **claim 6**, Gordon further teaches wherein the speaker support base, the guide flange and the support flange are formed from a single piece of material.

Regarding **claim 7**, Gordon further teaches wherein the speaker support system base is perforated (14, Fig. 1; col. 2, lines 49-54).

Regarding **claim 8**, this is a combination of limitations of Claim 1 and Claim 2. Therefore Claim 8 is interpreted and thus rejected for the reasons set forth above in the rejection of claims 1 and 2.

Regarding **claims 9, and 12-13**, these claims having similar limitations of Claims 3, and 6-7, respectively. Therefore Claims 9, and 12-13 are interpreted and thus rejected for the reasons set forth above in the rejection of claims 3, and 6-7.

Regarding **claim 14**, this is a combination of limitations of Claim 1 and Claim 6. Therefore Claim 14 is interpreted and thus rejected for the reasons set forth above in the rejection of claims 1 and 6.

Regarding **claim 17**, this claim having similar limitations of Claim 7. Therefore Claim 17 is interpreted and thus rejected for the reasons set forth above in the rejection of claim 7.

Regarding **claim 18**, Gordon further teaches wherein the plate includes an

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aperture (14, Fig. 1) and the speaker support system base is perforated with a plurality of closely spaced apart perforations in an area in alignment with the aperture in the plate to thereby provide a site for position of a speaker on the speaker support system which position permits free passage of sound from the speaker through the speaker support system the speaker support system base is perforated (i.e., extended from rear surface; col. 2, lines 49-54).

Regarding **claim 19**, Gordon teaches the speaker support system of claim 14 further including at least one speaker (10, Fig. 4) mounted on the speaker support base.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 4-5, 10-11, and 15-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon U.S. Patent 4,330,691 (Cited by Applicants).

Regarding **claim 4**, Gordon teaches the speaker support system of claim 1. Gordon does not explicitly disclose wherein the speaker support base fills about a first

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half of the ceiling grid opening and the ceiling tile fills about the second half of the ceiling grid opening.

Nevertheless, as would have been well known in the art at the time the invention was made, those of ordinary skill in the art would be able to modify the size of an integrated ceiling tile-loudspeaker taught by Gordon such that the speaker support base fills about a first half of the ceiling grid opening and the ceiling tile fills about the second half of the ceiling grid opening as claimed.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to perform such modification for purpose of providing loudspeakers having relatively small and distortionless active elements as suggested by Gordon in column 2, lines 47-48.

Regarding **claim 5**, Gordon teaches the speaker support system of claim 1. Gordon does not explicitly disclose wherein the speaker support base fills about three quarters of the ceiling grid opening and the ceiling tile fills about one quarter of the ceiling grid opening.

Nevertheless, as would have been well known in the art at the time the invention was made, those of ordinary skill in the art would be able to modify the size of an integrated ceiling tile-loudspeaker taught by Gordon such that the speaker support base fills about three quarters of the ceiling grid opening and the ceiling tile fills about one quarter of the ceiling grid opening as claimed.

Regarding **claims 10-11**, these claims having similar limitations of Claims 4-5, respectively. Therefore Claims 10-11 are interpreted and thus rejected for the reasons set forth above in the rejection of claims 4-5.

Regarding **claims 15-16**, these claims having similar limitations of Claims 4-5, respectively. Therefore Claims 15-16 are interpreted and thus rejected for the reasons set forth above in the rejection of claims 4-5.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Con P. Tran whose telephone number is (571) 272-7532. The examiner can normally be reached on M - F (8:30 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Vivian C. Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306; and 571-273-8300 effective July 15, 2005.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

cpt CPJ
June 27, 2005


XU MEI
PRIMARY EXAMINER